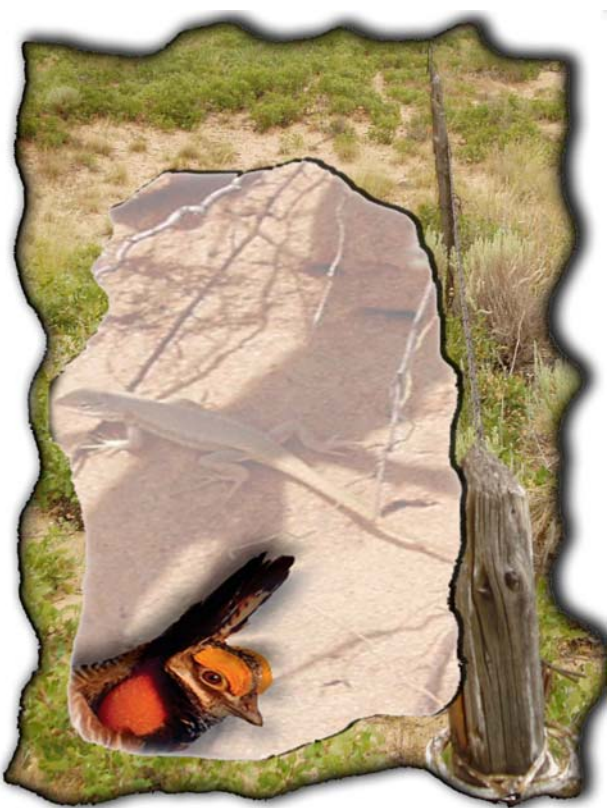


Appendix 8



APPENDIX 8

HABITAT SUITABILITY CRITERIA

FOR LESSER PRAIRIE-CHICKEN HABITAT

The 17 Habitat Evaluation Areas are located in the Isolated Population Area (IPA). (See Alternatives A and B in Chapter 2, Map A-1 and Map B-1.) The Habitat Evaluation Areas were established to serve as potential habitat building blocks for expansion of the lesser prairie-chicken. This species is considered nearly extirpated in Lea and Eddy Counties and would be high priority for expanded surveys, habitat improvement, and reserve site establishment. In addition, any areas where lesser prairie-chicken populations face imminent threats of habitat conversion or fragmentation by development would be considered highest priority for strategies aimed at preventing habitat loss or minimizing developmental impacts.

The following criteria have been developed to determine habitat suitability and guide management strategies (primarily leasing) for the 17 Habitat Evaluation Areas identified in the Working Group Strategy (see Appendix B) and Alternatives A and B. This criterion was set forth for the following parameters in relation to the year-round habitat needs of the lesser prairie-chicken within the IPA. Habitat areas that contain 320 acres or more and contains 40 percent or more of suitable habitat (factoring in impact radii) would not be leased, or leased with a no surface occupancy stipulation. Leasing with the no surface occupancy requirement would mean there are acceptable drilling locations outside the lease that would not adversely impact lesser prairie-chicken habitat. Reclamation on adjacent areas should receive high priority due to the size and level of influence these blocks have on habitat connectivity.

If there is a presence of birds with the Habitat Evaluation Areas then the recommendation provided for the Isolated Population Area (IPA) in Alternatives A and B of this amendment would be implemented.

Note: *Most of the Federal minerals have been leased within these habitat areas and are in some level of development. One assumption to be made is that once it is leased there is a likelihood of some level of development.*

CRITERIA:

- 1) Occupancy of lesser prairie-chicken- If there is evidence of LPC within the last three years and/or documented historic sightings.
- 2) Vegetation - Areas must be within the shinnery oak-dune plant community and provide the vegetative composition necessary for seasonal habitat requirements (i.e. nesting, brood rearing and winter thermal cover). If composition of vegetation is sufficient but may lack standing biomass then address those issues in coordination, consultation, and cooperation with the permittee.
- 3) Development and Fragmentation - The area being evaluated must contain a minimum “patch” size of 320 acres of Federal minerals that is not affected by fragmentation which is defined by impact radii. Studies in Kansas showed that lesser prairie-chickens seldom nest within 200 yards (.1 mile) of oil and gas well heads, 400 yards (.25 mile) of power lines, 860 yards (.5 mile) of improved roads, and 1370 yards (.75 mile) of large structures. Areas surrounding the “patch” (within 1 mile) may have some development but with a probability that reclamation will be

completed in the near future (within 1 to 5 years). The probability of reclamation depends upon the life of the wells or the field at the time of evaluation.

Data needed for evaluation:

- Presence or absence of lesser prairie-chickens (last 3 years)
- Percent vegetative composition (i.e., shrubs, grasses, forbs)
- Vegetative Condition (Range condition, Visual Obstruction readings, and production)
- Range site description
- Are there areas within the poly that are larger than 320 acres
- Estimate level of development (low, mid, high) within and adjacent to habitat polygon
- Evaluate the amount of Robel impact radii on suitable habitat (pads, roads, powerlines, compressors)
- Documented historic lekking activity (yes)

For areas to be considered Habitat Areas; the area needs to meet the occupancy criteria or the vegetation and development/fragmentation criteria or all three.

This criteria was designed for the 17 Habitat Evaluation Areas, but may be used in areas that have suitable habitat along with successful reclamation. When these criteria are used in areas other than the Isolated Population Area, the evaluator should take into account that other plant species may fulfill the role of shinnery-oak. This is particularly evident in the transition zone between the Chihuahuan Desert and the Southern Great Plains.